

NIMAK powerGUN

The new innovation by NIMAK

Presented by :

MR. BENEDIKT LEIDIG

Tel: +49 2742 7079-230
Mobil: +49 151 61365856
benedikt.leidig@nimak.de

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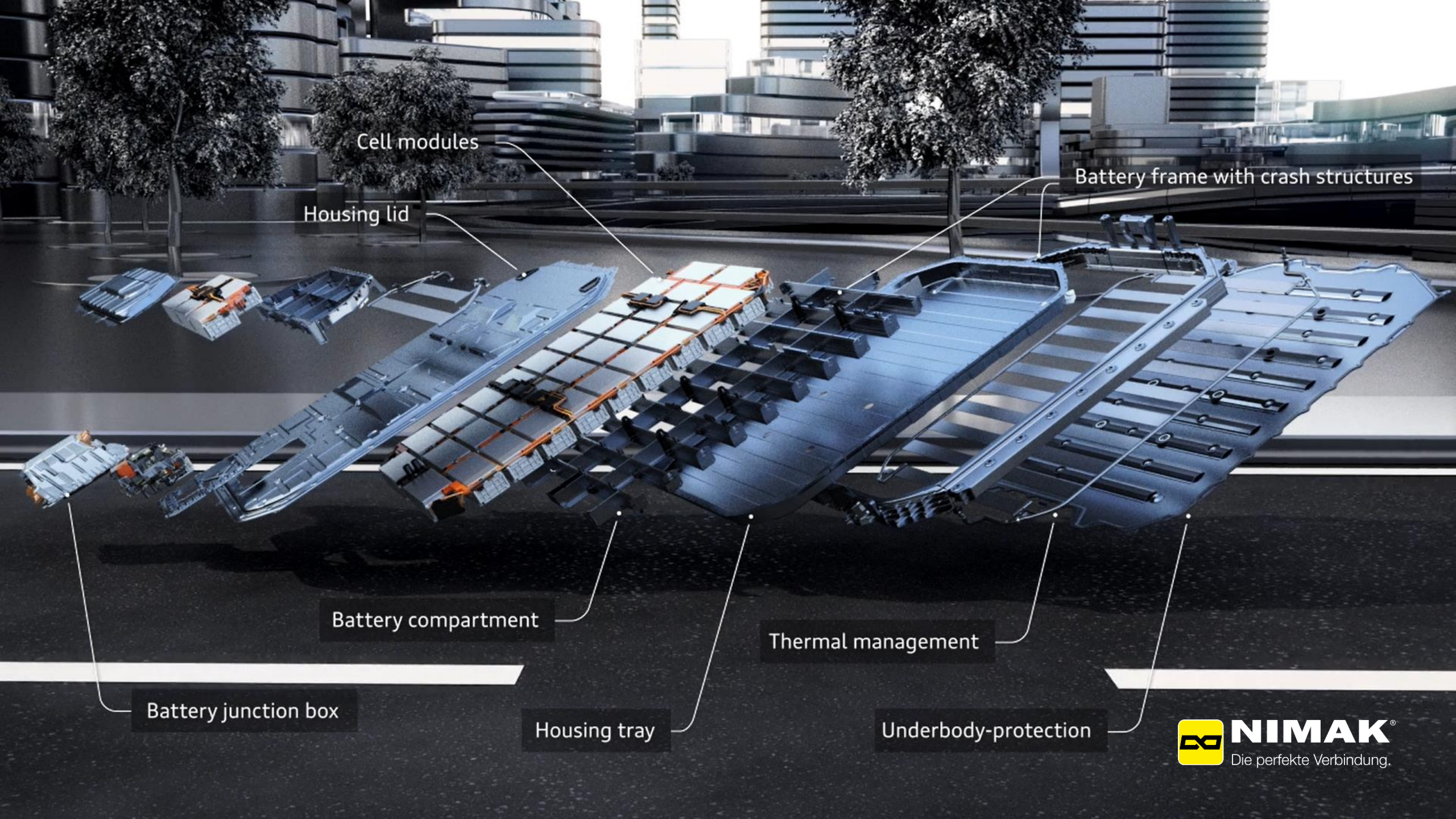
- 01** powerGUN 1.0 - tried and tested
- 02** powerGUN 2.0 – Next Generation
- 03** powerGUN 2.0 – benefits & savings
- 04** powerGUN 2.0 – data sheet



NIMAK | powerGUN 1.0

field-tested





Cell modules

Housing lid

Battery frame with crash structures

Battery compartment

Thermal management

Battery junction box

Housing tray

Underbody-protection

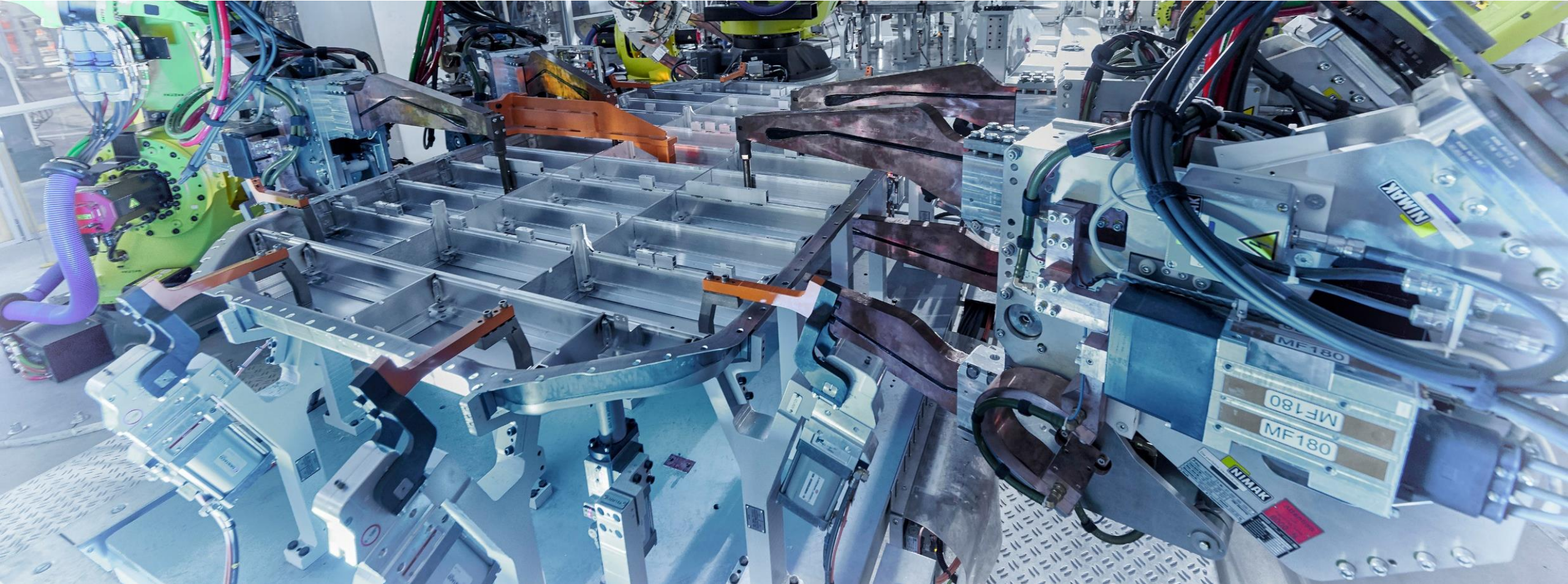
 **NIMAK**[®]
Die perfekte Verbindung.

NIMAK | powerGUN 1.0

powerGUN for aluminum battery frame



NIMAK[®]
FOOTPRINT **AUTOMOTION**



NIMAK | powerGUN 1.0

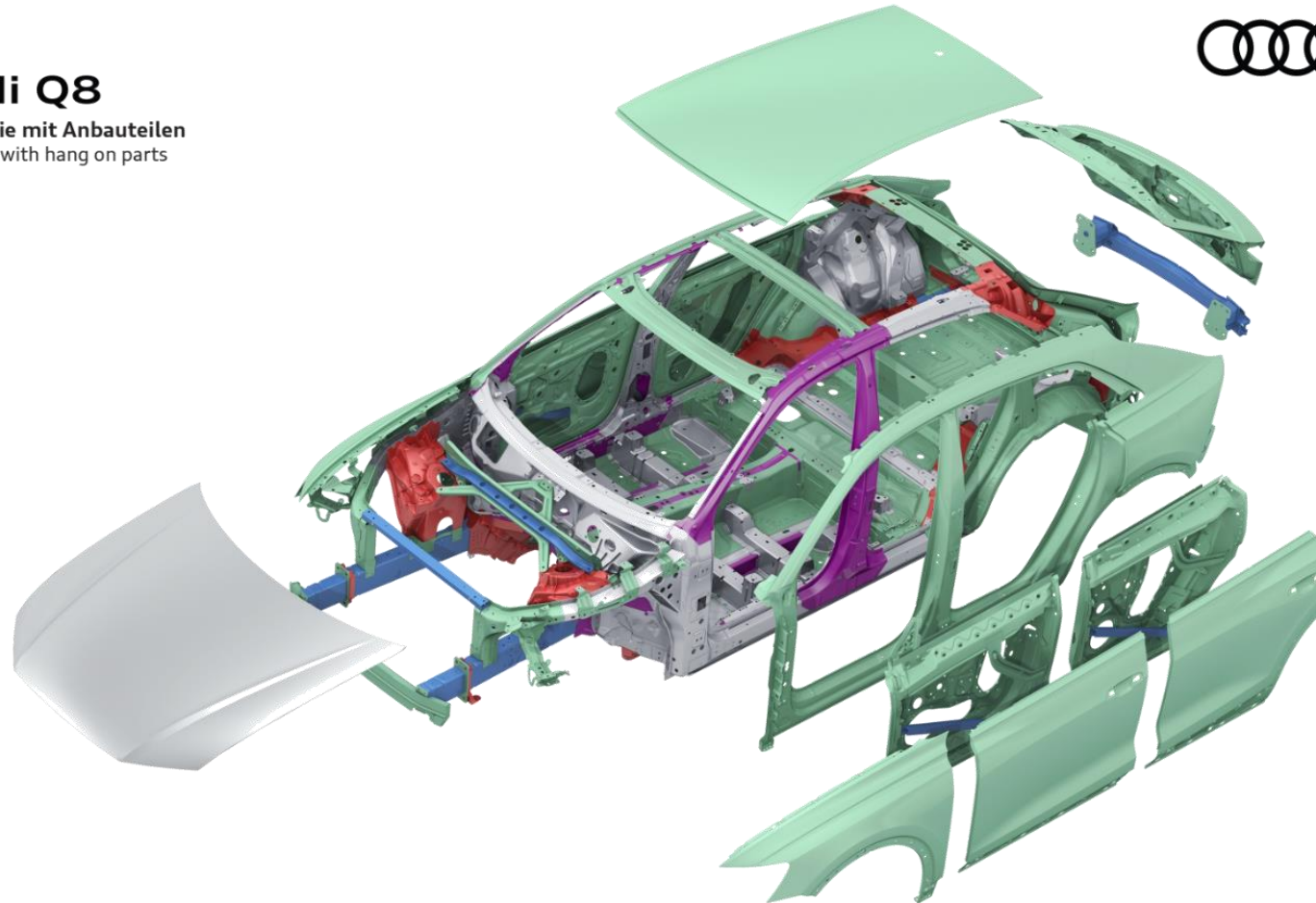
field-tested



NIMAK[®]
FOOTPRINT **AUTOMOTION**

Audi Q8

Karosserie mit Anbauteilen
Structure with hang on parts
09/23



 **Stahl kaltumgeformt**
Cold-formed steel

 **Stahl warmumgeformt**
Hot-formed steel

 **Aluminium-Guss**
Aluminum castings

 **Aluminium-Profil**
Aluminium sections

 **Aluminium-Blech**
Aluminium sheet

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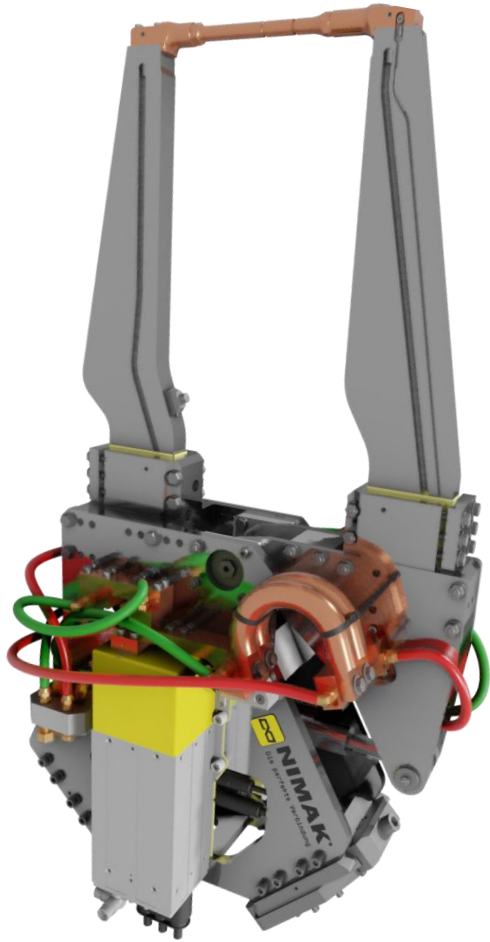


NIMAK | powerGUN

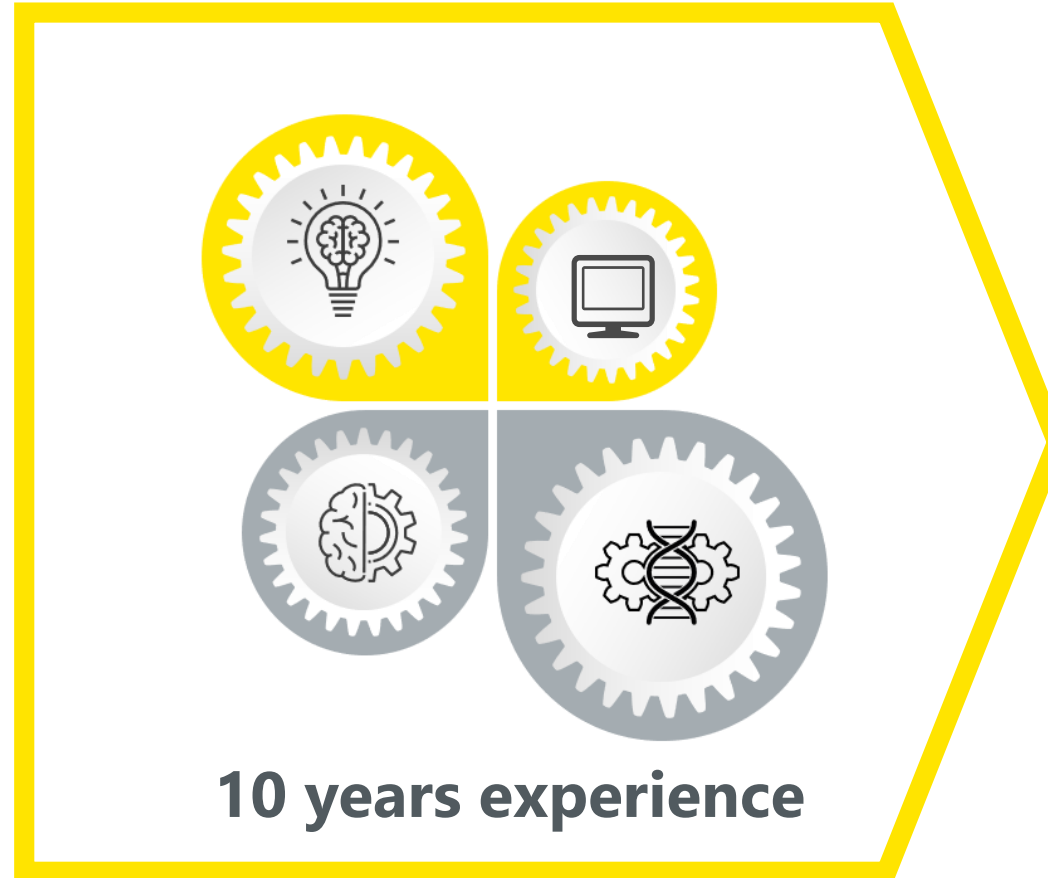
From 1.0 to 2.0



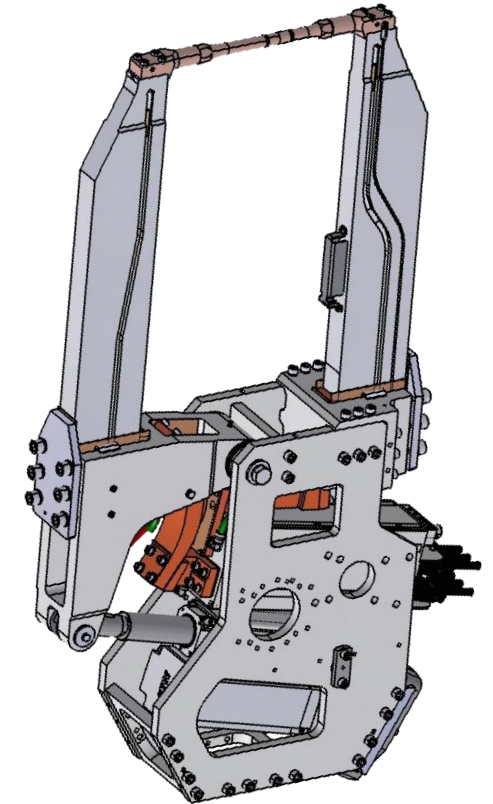
NEXT GENERATION



powerGUN 1.0



10 years experience

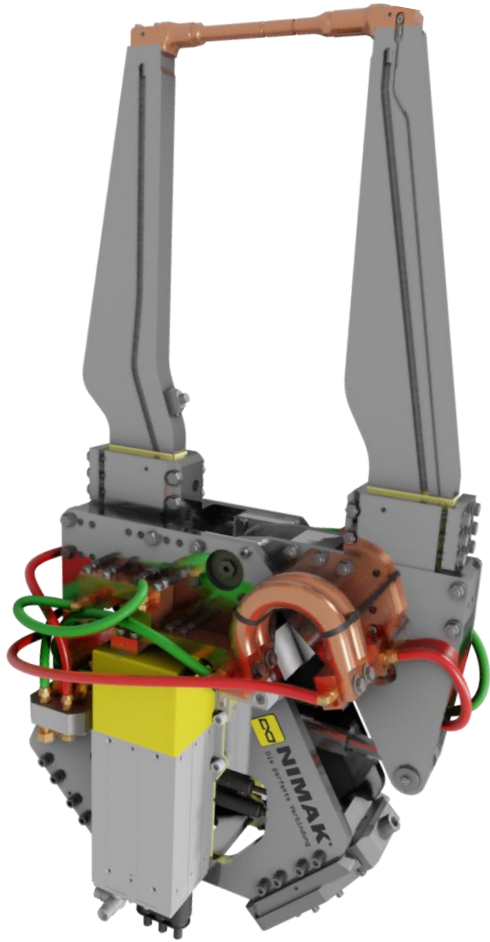


powerGUN 2.0



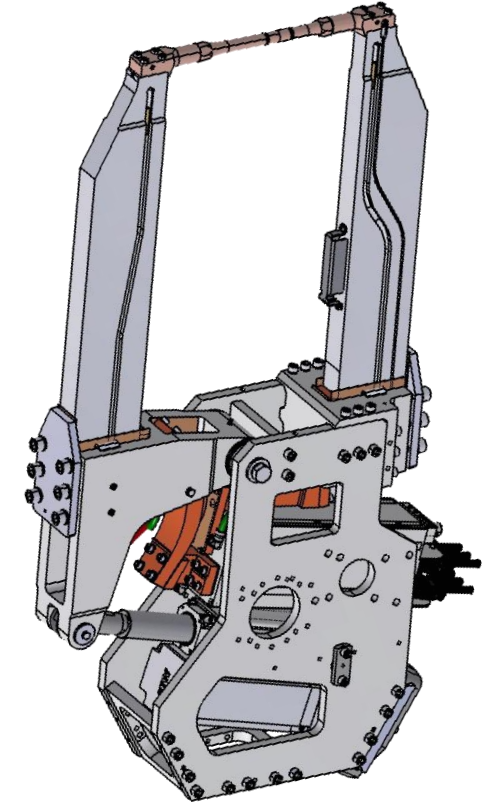
NIMAK | powerGUN NEXT GENERATION

From 1.0 to 2.0



powerGUN 1.0

- ▶ Weight reduction
- ▶ Higher gun body stiffness
- ▶ Lean and compact design
- ▶ Innovative cooling system
- ▶ Different current carrying capacity class with one gun body
- ▶ several robot bracket location at each gun body



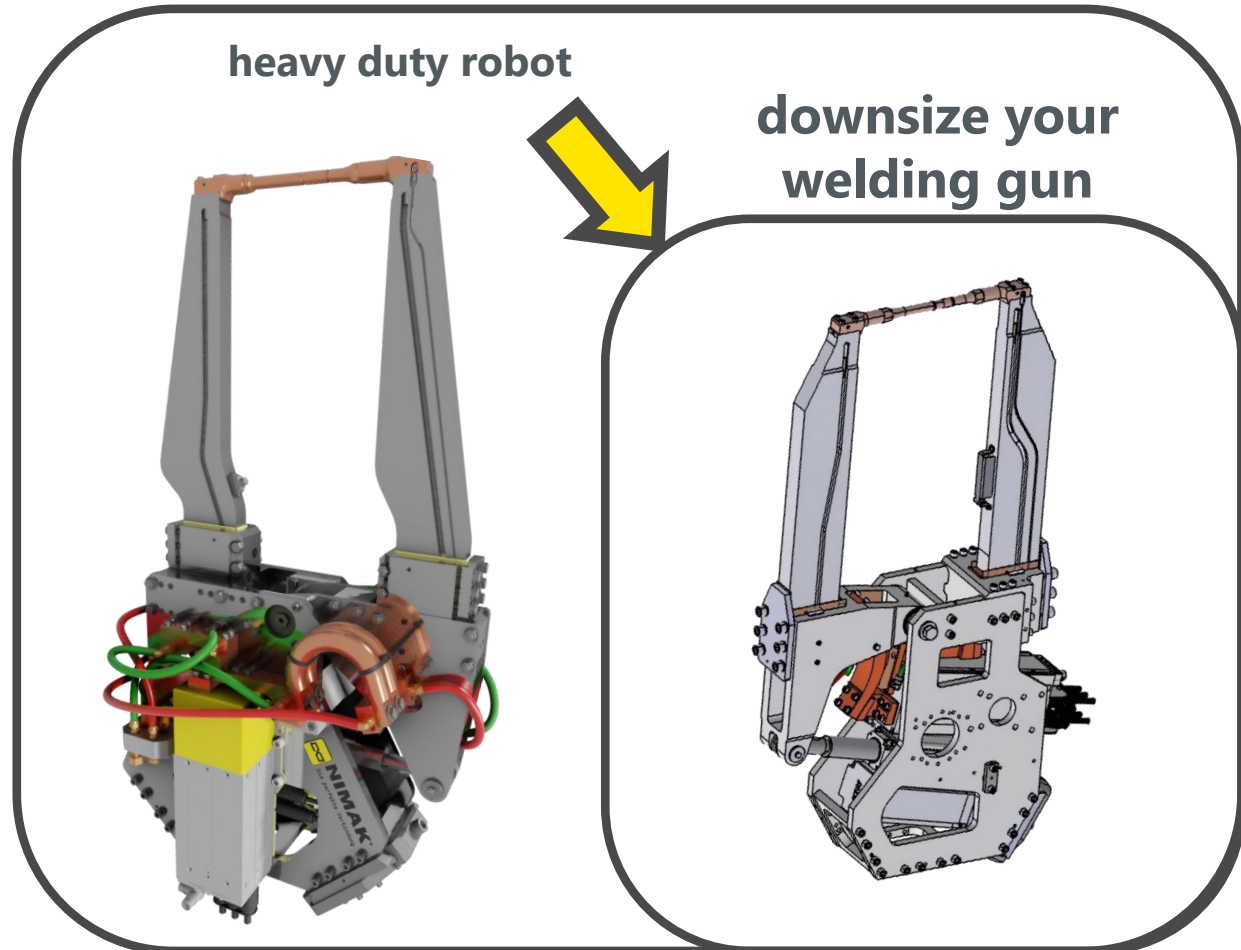
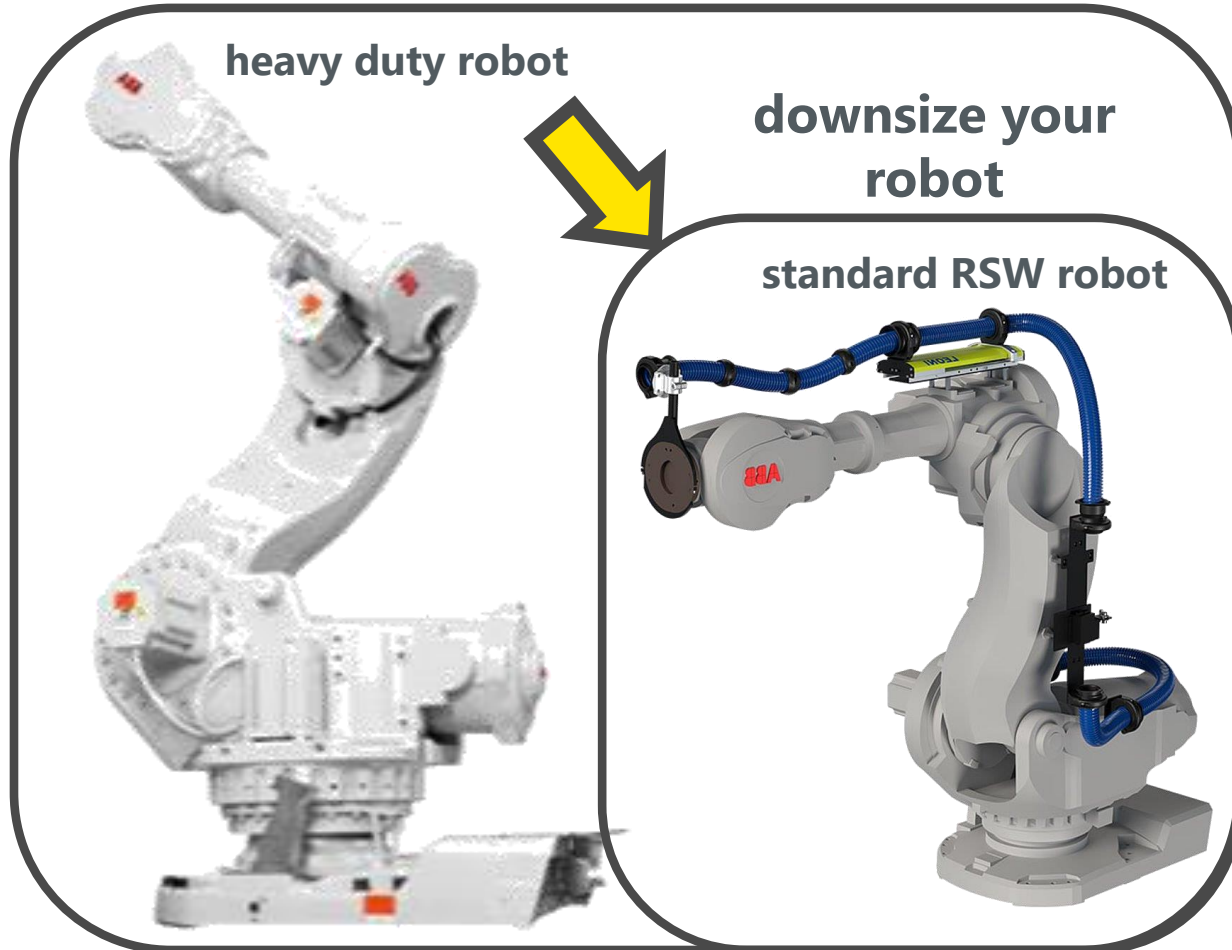
powerGUN 2.0

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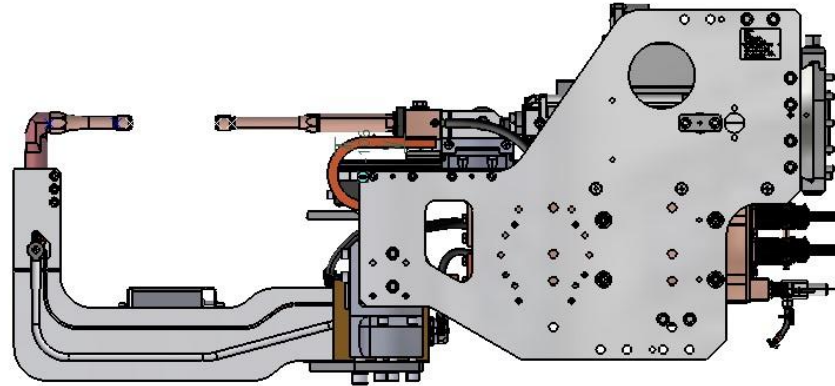
downsize your robot – lightweight powerGUN



multiGUNBODY

- ▶ change of current carrying capacity class by change of transformer
- ▶ change of body in white parts -> change of weld current -> no new welding gun needed

NIMAK powerGUN 30|45|60 kA



powerGUN 60



2 x MF244

powerGUN 45



MF388

powerGUN 30

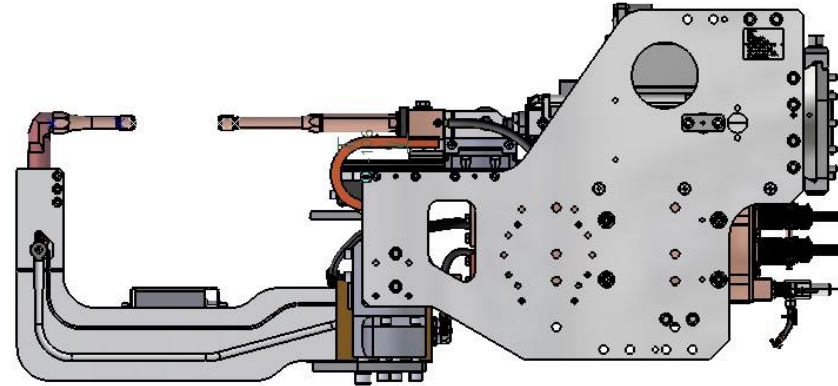


MF244

NIMAK | powerGUN benefits & savings



NIMAK powerGUN 20|30|45|60 kA



**powerGUN
HD STEEL**



MF 195

powerGUN 60



2 x MF244

powerGUN 45



MF388

powerGUN 30

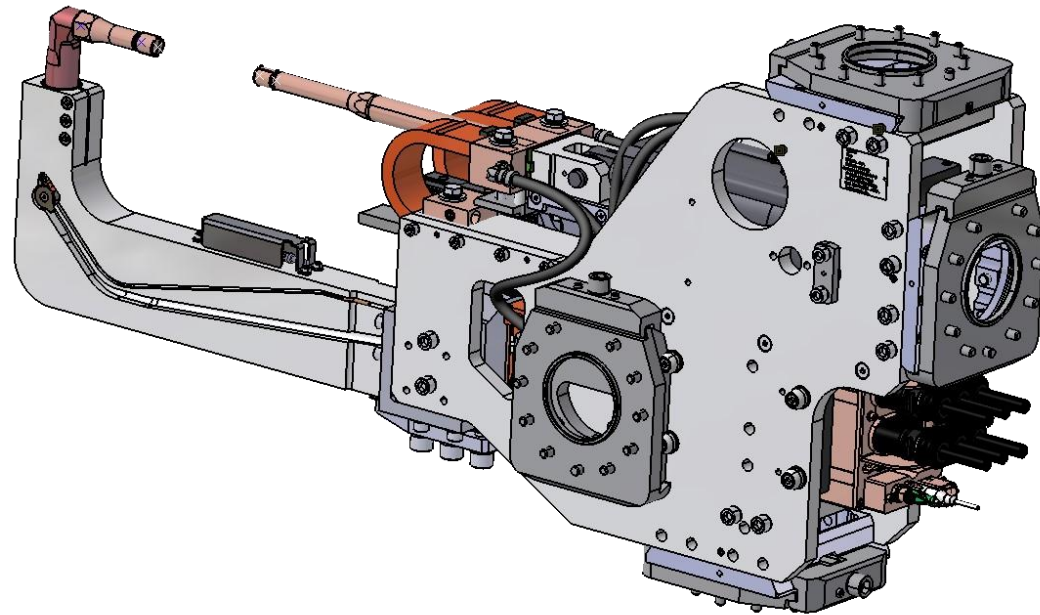


MF244

multiGUNBODY

- ▶ 5 robot mounting location at each gun body
- ▶ no additional brackets for robot mounting is needed
- ▶ Lateral robot mounting position in order to reduce the payload especially on axis 5

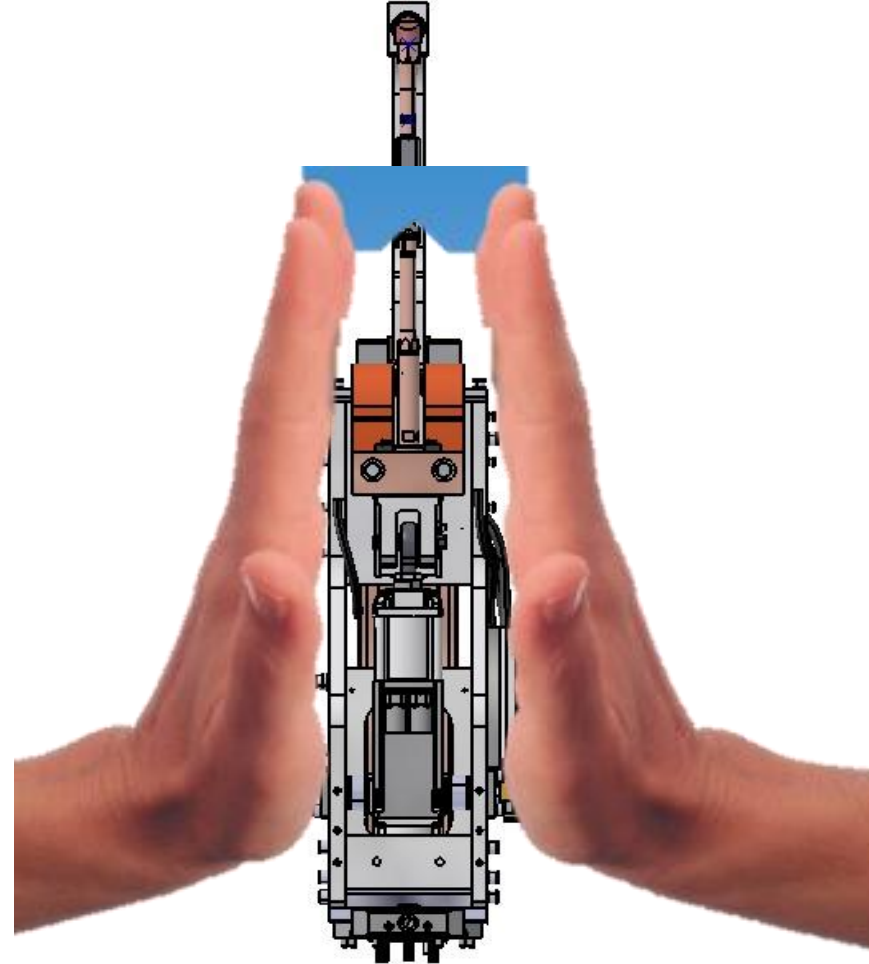
5 Robot Mounting Locations



multiGUNBODY: lean design

lean design

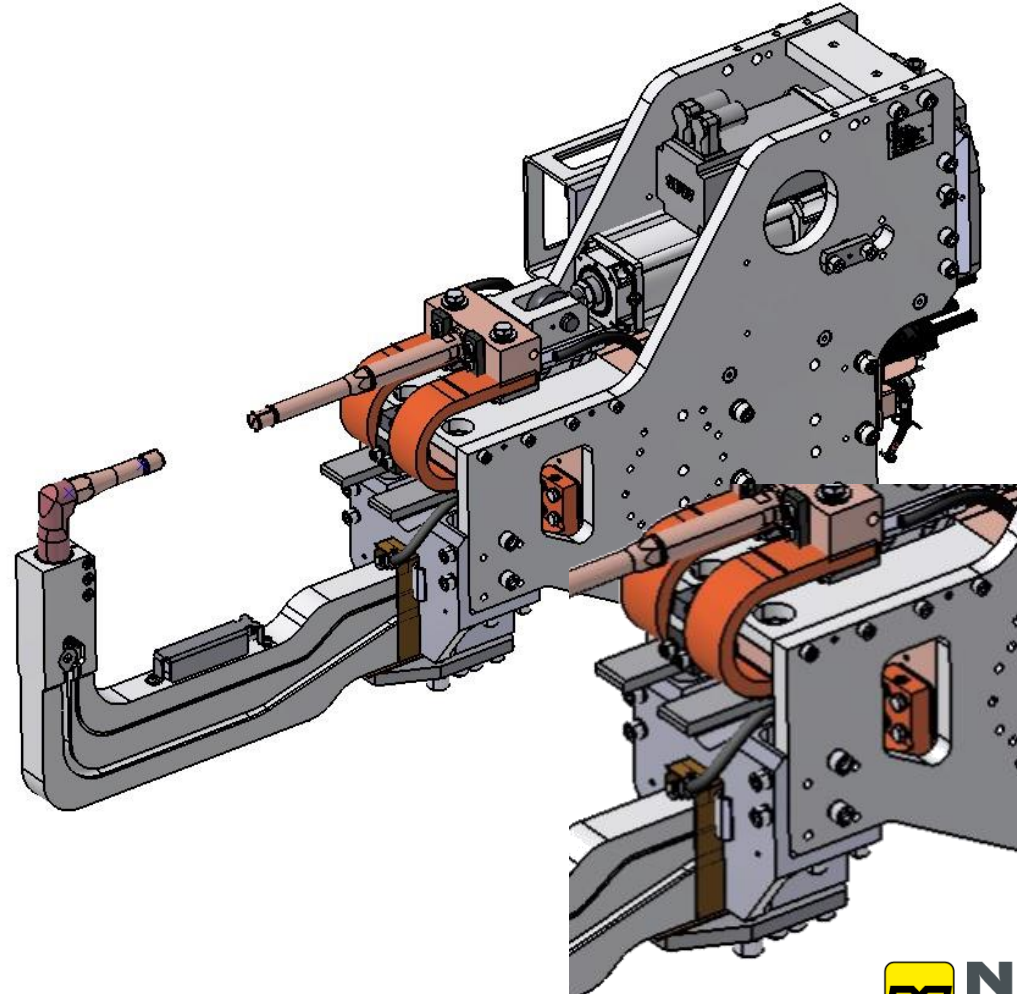
- ▶ current transmission parts and servo drive completely integrated in the GUNBODY – no interfering parts
- ▶ easy access – prevention of near miss welding gun/body in white
- ▶ Lean design through simplicity and parts reduction
- ▶ shortened simulation process due to one GUNBODY



multiGUNBODY: high dynamic robots

High dynamic robots

- ▶ optimized position of center of gravity at middle of robot mounting location left/right side
- ▶ balanced welding gun for fast robot movement
- ▶ Shortened cycle time
- ▶ high stiffness of gun body



Innovative cooling system

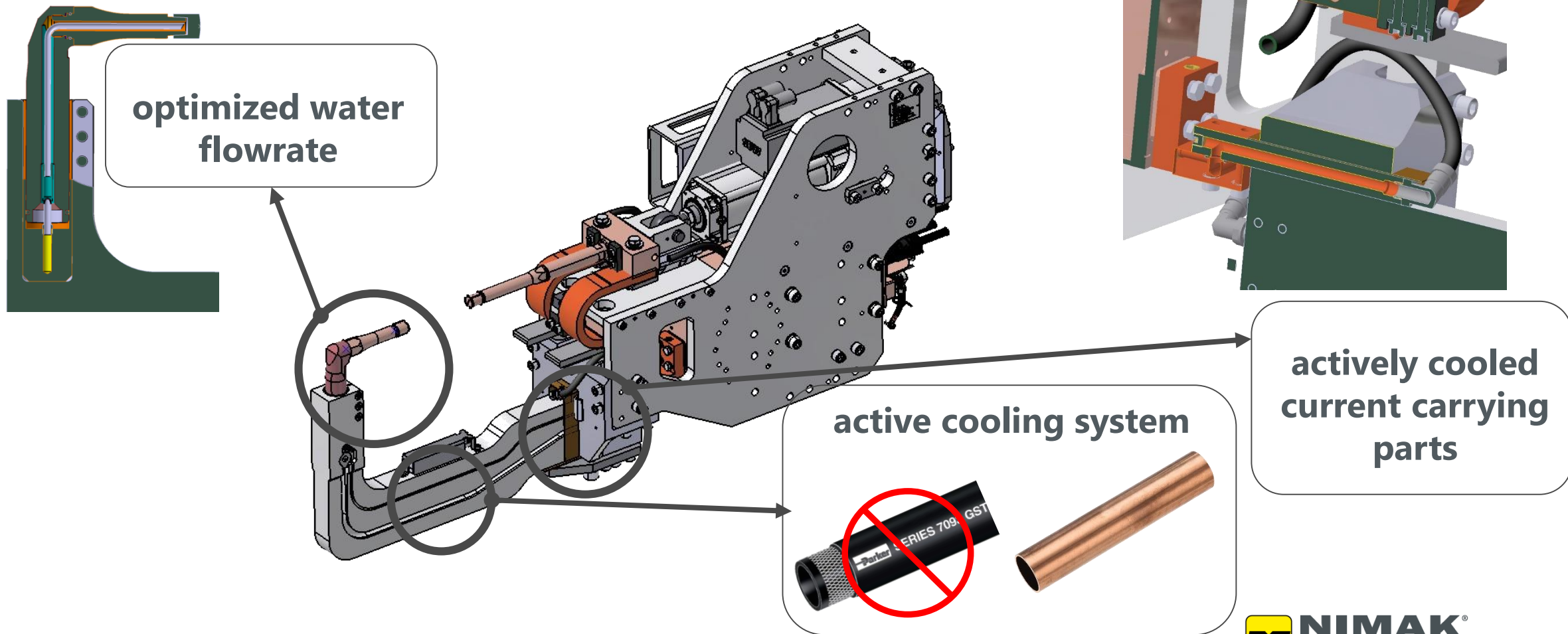


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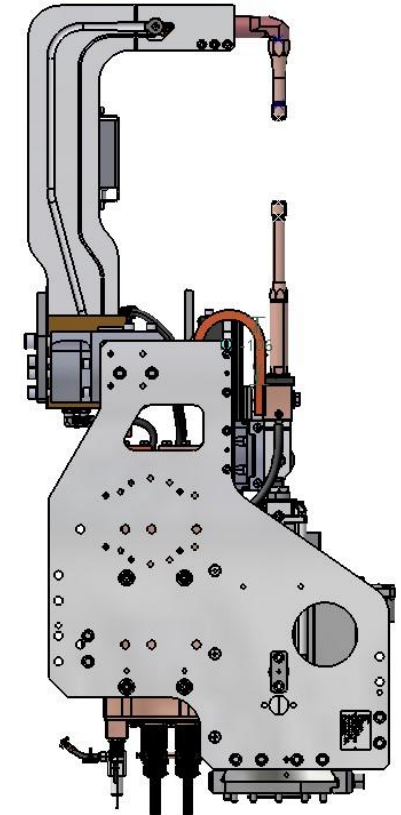
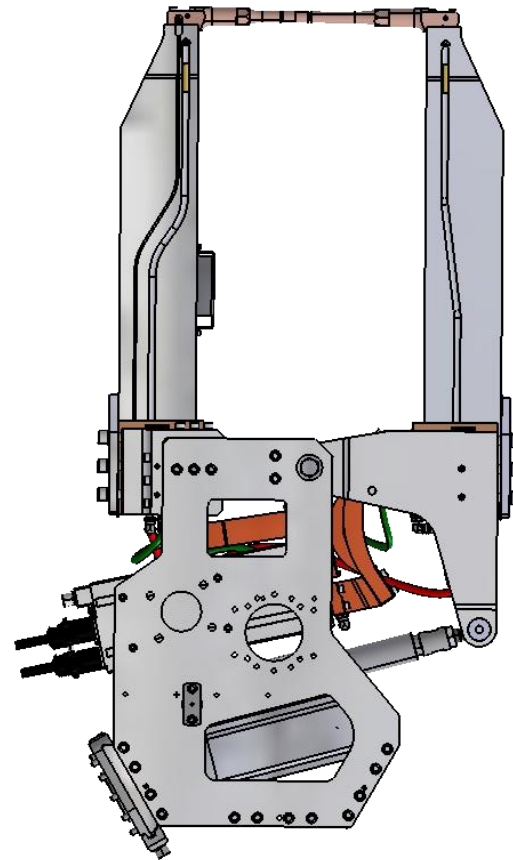
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NIMAK powerGUN 30|45|60 kA

power class

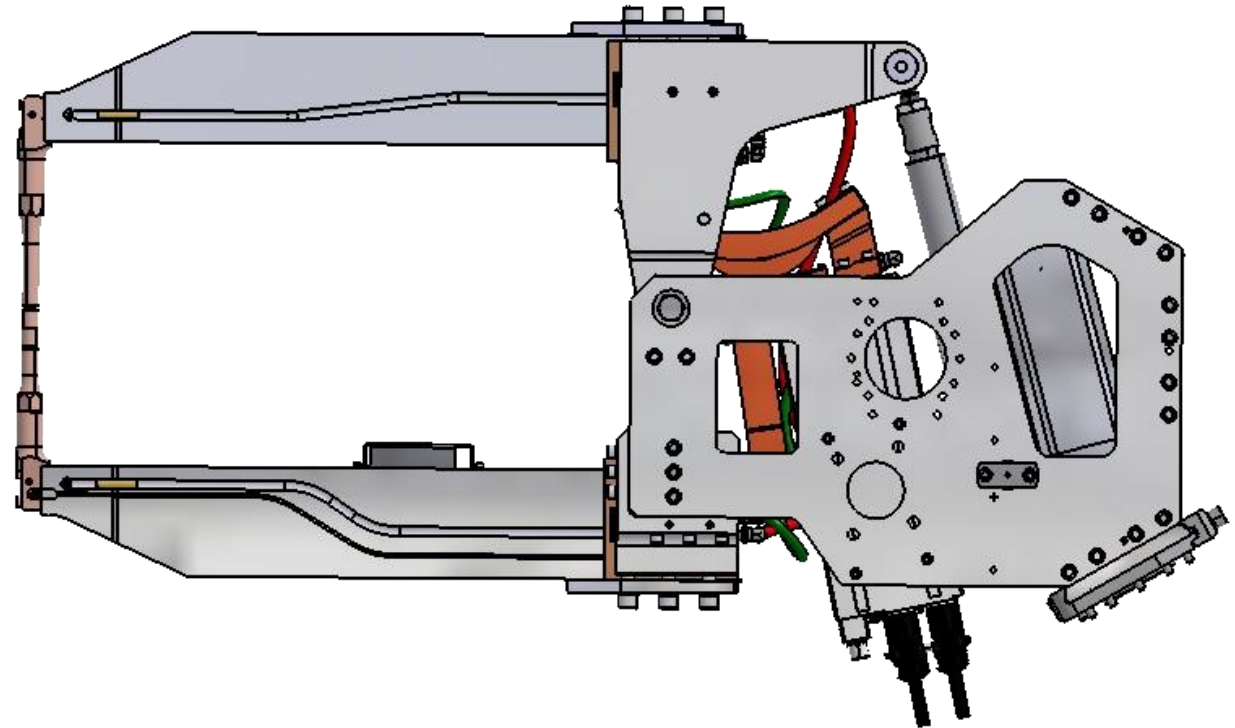
- ▶ powerGUN 60
 - e.g. battery frame, heavy duty application
 - alu sheet approx. from 2.5 to 4 mm
- ▶ powerGUN 45
 - e.g. tailgate, doors, hood
 - alu sheets approx. < 2,5 mm
- ▶ powerGUN 30
 - alu micro spot



data sheet powerGUN X

multiGUNBODY X

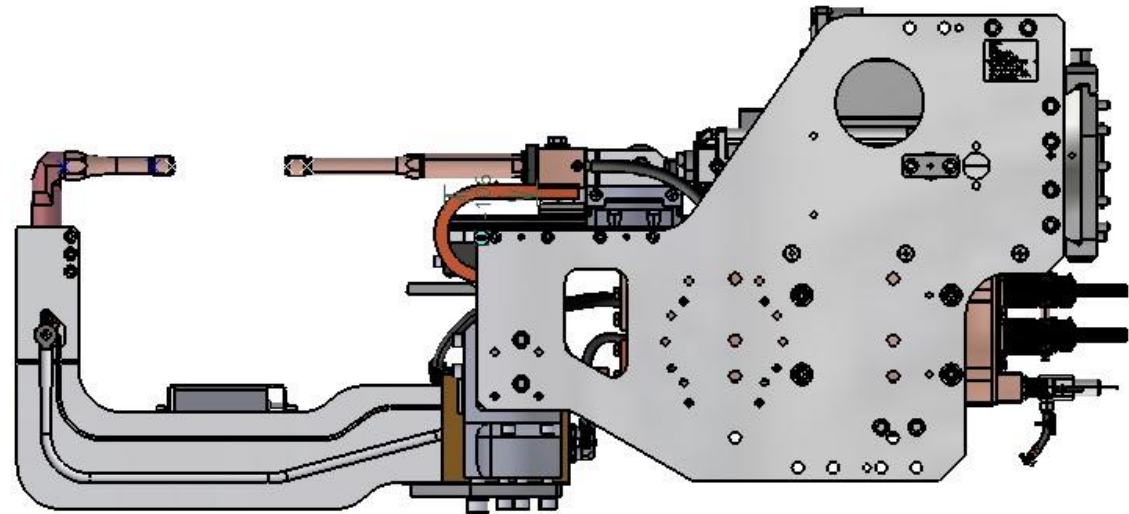
- ▶ Peak force: 8 kN at 1.000 mm
- ▶ Throat depth range: 1.000 mm
- ▶ Throat length range: 1.300 mm
- ▶ Acceleration: 150 ms to v max
- ▶ Velocity: min. 215 mm/s
- ▶ Stroke: 160 mm
- ▶ Opening angle: 24°
- ▶ 5 robot mounting locations
- ▶ Weight gun body: 134 kg



data sheet powerGUN C

multiGUNBODY C

- ▶ Peak force: 8 kN
- ▶ Throat depth range: 800 mm
- ▶ Throat length range: 1.300 mm
- ▶ Acceleration: 100 ms to v max
- ▶ Velocity: min. 450 mm/s
- ▶ Stroke: 160 mm and 250 mm
- ▶ Opening stroke: 125 to 250 mm
- ▶ 5 robot mounting locations
- ▶ Weight gun body: 107 kg



THANK YOU!

For YOUR Time

Your success start beyond this point.



NIMAK® GmbH
Frankenthal 2
D-57537 Wissen



E-mail: info@nimak.de



Phone: +49 (0) 2742 70 79 0

